

## **REMARKS/ARGUMENTS**

### **1. Claim Amendments**

The Applicant has amended claims 1, 4-5, 7-8, 10-11, 14-15, 21, 31, 33-34, 37-38, and 40. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-5, 7-8, 10-12, 14-15, 18-19, and 31-42 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

### **2. Examiner Objections – Specification**

In paragraph 1 of the Office Action, the Examiner objected to the abstract of the disclosure because it was over 150 words. The Applicants have attached an amended Abstract hereto on a separate sheet.

### **3. Examiner Objections - Claims**

Claims 7-8, 40-11, 14, 21, 33, 37-38, and 40 stand objected to under 37 C.F.R. 1.75(c) as not being in proper form. The Applicant appreciates the Examiner's thorough review of the claims. The Applicant has amended the claims as suggested by the Examiner in order to correct the informalities. The Examiner's consideration of the amended claims is respectfully requested.

### **4. Claim Rejections – 35 U.S.C. § 101**

Claims 1 and 31 stand rejected under 35 U.S.C.101 because the claimed invention is directed to non-statutory subject matter. Claims 1 and 31 have been amended to direct each of them to statutory subject matter. Claims 4, 5, 7, 8, 10-12 and 14 are rejected for being dependent upon a rejected base claim. Claims 32 and 33 are rejected for being dependent upon a rejected base claim. The rejected base claims from which Claims 4-5, 7-8, 10-12, 14 and 32-33 depend have been amended to direct them to statutory subject matter.

**5. Claim Rejections – 35 U.S.C. § 103 (a)**

Claims 1, 8, 10, 14, and 15, stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kandala et al., US 6,977,972 (Kandala). Applicant respectfully traverses the rejection. Kandala is directed to *storing* soft information, not *generating or calculating* soft information which is used to obtain a reliability value as in the present invention. This is acknowledged by the Examiner as he notes that Kandala does not explicitly teach *storing* the third distance. According to the Examiner: "Therefore, it would have been rendered obvious to one skilled in the art to *store* each set of the neighborhood defining the vectors for the benefit of setting a predetermined range for the measure of reliability." Kandala does not teach generating soft information as claimed in amended claims 1, 8, 10, 14 and 15.

Specifically, Kandala introduces hybrid hard/soft information, where hard information is used when a bit is considered to be very reliable. Hard information is used when the received vector is "outside" the possible ideal signal points (see Fig 2), or when the bit value is the same for the different signal points in the neighborhood. Kandala introduces a neighborhood of a received vector to find the soft information. The distance used for calculating the soft information in Kandala is from the received vector to the center of gravity of this neighborhood, rather than a distance from the received signal to the closest signal point, which is what is claimed in the present invention.

Claims 4, 5, 11, 12, 18, 19, 31, 34, and 37-42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kandala in view of Gerlach et al. (US6,499,128.) As noted above, Kandala fails to teach generating soft information as claimed in amended claims 1, 8, 10, 14 and 15. Gerlach fails to remedy the deficiency. Therefore, the allowance of claims 1, 4-5, 11-12, 14-15, 18-19, 31, 34 and 37-42 is respectfully requested.

**6. Allowable Subject Matter**

The Applicant notes with appreciation the conditional allowance of claims 21, 35, and 36.

**CONCLUSION**

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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